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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )

Advanced Television Systems )  
and Their Impact upon the Existing )  
Television Broadcast Spectrum )

MM Docket No. 87-268

To: The Commission

**REPLY COMMENTS OF APCO**

The Association of Public-Safety Communications Officials-International, Inc.  
("APCO") hereby submits the following reply to comments filed in response to the  
Commission's Sixth Further Notice of Proposed Rulemaking in the above-captioned  
Digital Television ("DTV") proceeding.

APCO has supported the Commission's proposed DTV channel plan, with certain  
modifications, as it will open the door for critical new spectrum allocations for police, fire,  
emergency medical and other public safety communications. In particular, the proposed  
reallocation of spectrum now reserved for UHF television channels 60-69 would release  
frequencies that are immediately adjacent to 800 MHz bands now used by many public  
safety agencies around the country. APCO has also urged the Commission to eliminate, to  
the maximum extent possible, proposed DTV channel allotments in channels 60-69 to  
ensure that an adequate amount of spectrum is released as soon as possible. APCO has  
also suggested that the Commission explore modifications to the DTV channel plan to  
permit the release of spectrum adjacent to current public safety operations in the 150-174

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MHz band and in the currently shared 470-512 MHz band (UHF channels 14-20). Finally, APCO urged that certain aspects of the DTV table be amended to provide adequate interference protection for public safety agencies already operating in the 470-512 MHz band.

The Commission's proposal to exclude channels 60-69 from the DTV core channel assignment has received widespread support from federal, state, and local government agencies from around the nation.<sup>1</sup> They recognize, as does APCO, that this is the single most important opportunity that the Commission is likely to have to implement a significant portion of the public safety spectrum requirements recently identified by the Commission's Public Safety Wireless Advisory Committee ("PSWAC"). The following reply will address certain modifications to the DTV plan proposed by Motorola (which APCO supports)<sup>2</sup> and in the Broadcasters' Comments (which APCO opposes). We also address the Broadcasters' irresponsible proposal to reduce and/or eliminate existing land mobile use in the 470-512 MHz band.

**I. THE COMMISSION SHOULD ADOPT THE MOTOROLA ALTERNATIVE DTV ALLOTMENT TABLE.**

Motorola, in its comments, has proposed an alternative DTV channel plan which greatly reduces the number of channel 60-69 interim DTV channel allotments from thirty to just five. This was accomplished by increasing slightly the "penalty" attached to a DTV allotment in channels 60-69. Significantly, it appears that this alternative reduces interim

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<sup>1</sup> In particular, APCO notes the attached recent joint letter from organizations such as the National League of Cities, the U.S. Conference of Mayors, the National Association of Counties, the National Association of State Legislatures, the International Association of Chiefs of Police, and the International Association of Fire Chiefs.

<sup>2</sup> As noted below, APCO also supports the re-packing plan proposed by Ericsson.

DTV allotments in channels 60-69 without any impact on broadcast station coverage. A second alternative offered by Motorola would further reduce the number of interim DTV allotments in channels 60-69 to just two, in Stockton, CA, and Newton, NJ, though it would require slight short-spacing of 12 DTV allotments.<sup>3</sup>

These proposals, especially the second alternative, represent a substantial improvement over the FCC's proposal.<sup>4</sup> They would leave additional spectrum vacant and available for immediate reallocation with no or very little detrimental impact on the DTV plan. The FCC's original plan, while an important step in the right direction (and obviously better than the excessively protective Broadcaster proposal discussed below), would free up significantly less spectrum than the Motorola plan due to the additional DTV allotments proposed in and near major metropolitan areas. The remaining spectrum in channels 60-69 would not be released under the Commission's original plan until the conclusion of the DTV transition many years from now. However, public safety agencies around the nation cannot wait that long for critical spectrum relief. Spectrum is needed now, and channels 60-69 are an excellent source of spectrum for immediate reallocation.

APCO also supports Ericsson's proposal to pack all DTV channels as tightly as the current NTSC VHF channels. This would promote the more efficient utilization of the spectrum for the benefit of all users, including public safety services.

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<sup>3</sup> To the extent possible, the Commission should group any necessary channel 60-69 DTV allotments on a single channel which is allotted to NTSC stations in other major metropolitan areas. That would increase the likelihood of the same channels being available for reallocation across most of the nation.

<sup>4</sup> Unfortunately, Motorola was unable to eliminate short-spacing between certain DTV allotments and existing land mobile operations. APCO would hope that those allotments can be eliminated through further adjustments to the table (e.g., by using channels 2-6 as discussed below). If not, the short-spaced DTV stations must be required to protect land mobile operations (especially public safety) from interference.

**II. THE COMMISSION SHOULD REJECT THE BROADCASTERS' PROPOSAL TO CONTINUE TO RESERVE CHANNELS 60-69 FOR BROADCAST ONLY USE.**

The Broadcasters' Comments advocate use of all current UHF and VHF television channels, including channels 60-69, for exclusive broadcast use during the extended DTV transition process. Under the Broadcasters' plan, the Commission would not even consider the use of existing broadcast spectrum for other purposes until the end of the lengthy transition period. No one would dispute the need for an orderly transition to DTV. The Broadcasters' plan, however, is an excessive luxury that sound spectrum management can ill afford. It would perpetuate current inefficient broadcast use of over 400 MHz of valuable radio spectrum and withhold immediate spectrum relief in channels 60-69 for vital services that protect the safety of life and property.

As discussed in APCO's initial comments, the Commission has been trying for years to use the VHF and UHF television bands more efficiently to permit the sharing or reallocation of spectrum for other important services. The Broadcasters' proposal suggests that once again they are trying to postpone and perhaps derail permanently any such reallocation of "their" spectrum. But it is not "their" spectrum. It is a public resource which the Commission has an obligation to allocate and manage in a manner which promotes the public interest. In light of the recent findings of PSWAC, the public interest demands that the Commission adopt a DTV channel plan which maximizes the extent to which spectrum can be reallocated immediately for public safety communications. The DTV core plan, as modified by Motorola, achieves that goal while

still providing every single full service television broadcaster a second 6 MHz channel during the DTV transition.

The Broadcasters attack the Commission's channel plan, claiming that it is motivated by the potential for immediate auction revenue from the reallocated channels 60-69. See Broadcasters' Comments at 40-42. APCO agrees with the Broadcasters that the potential for auction revenue cannot, and should not, play a role in fundamental Commission spectrum allocation decisions. But this is not the sole issue in this matter. While it has been suggested that some of the spectrum released from channels 60-69 could be auctioned for commercial services, the Commission has also suggested that a portion of the spectrum should be reallocated for public safety. Under the Communications Act, it are these compelling and immediate public safety spectrum needs, not the potential for auction revenue, that demand the Commission's attention and action in this proceeding.

The Broadcasters further argue that the value of reallocated spectrum would be greater if the Commission delayed any spectrum reallocation until the end of the DTV transition, on the theory that larger and more valuable blocks of spectrum might be available at that point. This argument is irrelevant for a number of reasons. First, this wrongly assumes that the driving force of the Commission's decision should be the revenue potential of the reallocated spectrum. Second, the Broadcasters' analysis ignores the immediate benefits to the public of releasing and reallocating a portion of the broadcast spectrum now, rather than at the end of the DTV transition. Now is when police, fire, emergency medical and other public safety agencies need spectrum relief. Now is when they need to alleviate life-threatening channel congestion in metropolitan areas. Now, is when they need spectrum to address interoperability problems that impede

multi-agency emergency response. Now, is when they need spectrum to implement the communications tools they need to fight crime, battle fires, and save lives. Now is when the Commission should reallocate channels 60-69 in fulfillment of an important part of the public safety spectrum needs identified by PSWAC.

Finally, the Broadcasters claim that, in any event, the Commission's core DTV allotment plan would not actually work to free up a substantial amount of spectrum for other uses in the near future. As there would still be many NTSC and interim DTV stations in channels 60-69 during the transition, especially in heavily populated areas, they contend the immediate benefits would be minimal. However, as discussed above, Motorola has demonstrated that minor changes to the Commission's plan would significantly improve that situation, eliminating all but 2 to 5 of the 30 interim DTV allotments proposed by the Commission. While there would still be over 90 NTSC stations in channels 60-69, the adoption of reasonable TV/land mobile interference rules (such as the current rules for channels 14-20 and 69) would permit a substantial amount of spectrum to be made available immediately for public safety use in every part of the country.

The basic mathematics is not that difficult. In TV channels 14-20, which are currently shared with private and mobile radio services, including public safety, there are approximately 175 operating television stations, an average of 25 stations per channel.<sup>5</sup> In contrast, there are only 92 NTSC stations in channels 60-69, an average of slightly over nine stations per channel. Even with the far heavier television utilization of the channel 14-20 band, the Commission in Docket 18261 and subsequent proceedings was able to

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<sup>5</sup> See Broadcasting and Cable Yearbook 1996, pp. C-127 (U.S. Television Stations by channel).

fashion a sharing arrangement which made two television channels in the major metropolitan areas available for non-broadcast use, including public safety. In Los Angeles, the most spectrum congested area of the country, three channels have been made available for non-broadcast use through careful spectrum engineering. Certainly, far more could be done in the less crowded channel 60-69 band. Whether designated core DTV spectrum or not, the Commission in fashioning the final DTV plan has an obligation to incorporate allocation and sharing criteria which will make available in channels 60-69 at least 24 MHz of spectrum (4 TV channels) for immediate public safety use.

### **III. THE FCC SHOULD CONSIDER WHETHER USING CHANNELS 2-6 FOR DTV COULD RELEASE OTHER, MORE DESIRABLE, SPECTRUM FOR REALLOCATION.**

The joint Broadcasters Comments, the Association for Maximum Service Television ("AMST"), and NBC all suggest that channels 2-6 are suitable for DTV use (See Comments of NBC at 2). APCO does not disagree. Indeed, to the extent that inclusion of channels 2-6 in the DTV core would provide the Commission with additional flexibility in its DTV allotments, and therefore greater opportunity to reallocate other broadcast spectrum to meet public safety spectrum requirements, this aspect of the Broadcasters' proposal is worthy of consideration.

Specifically, the Commission should re-evaluate its DTV plan, first by implementing Motorola's proposed modifications discussed above (and Ericsson's re-packing plan), and second by exploring the benefits of adding channels 2-6 to the DTV core spectrum. Using channels 2-6 for DTV could have several highly desirable results. First, the availability of channels 2-6 for permanent DTV allotments could eliminate the

need to allot any DTV channels in channels 60-69, thus maximizing the extent to which spectrum can be made available now for public safety. Second, using channels 2-6 may allow the Commission to exclude channel 7 from the core DTV spectrum, allowing that channel to be reallocated eventually for public safety land mobile operations. As APCO noted in its initial comments, channel 7 occupies spectrum immediate adjacent to VHF "high band" spectrum heavily used by many public safety agencies, and would be useful for meeting certain wide-area public safety needs. Third, using channels 2-6 for DTV could allow for reduced use of channels 14-20 for DTV (470-512 MHz), thus providing additional protection for existing land mobile operations on those channels, and hopefully allowing for additional land mobile sharing of the band. APCO challenges the Commission to redesign its DTV allotments in light of these important public safety considerations and the broadcasters willingness to use channels 2-6 for DTV.<sup>6</sup>

#### **IV. THE COMMISSION MUST PROTECT AND MAINTAIN EXISTING PUBLIC SAFETY USE OF UHF CHANNELS 14-20.**

With some important exceptions noted by APCO, APCO chapters, and various public safety agencies from the New York, San Francisco, and Los Angeles areas, it appears the Commission's table of DTV allotments generally protects existing land mobile operations in the 470-512 MHz band. This is a critical consideration for APCO as some of the largest public safety agencies in the nation depend upon 470-512 MHz frequencies for their core communications capability. This includes the New York City Police

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<sup>6</sup> APCO recognizes that channels 2-6 are already used extensively in major metropolitan areas, especially along the East Coast and in California. Nevertheless, using these additional channels wherever possible might release other DTV allotments for use in major metropolitan areas.



Department, the Los Angeles Police Department, and the Los Angeles County Sheriff's Department. They are joined by hundreds of other critical agencies of all sizes.

Despite this critical role played by channels 14-20 in the protection of life and property, the Broadcasters suggest that public safety and other land mobile use of channels 14-20 (470-512 MHz) be reduced, by designating only one of the two channels assigned in the relevant metropolitan area for public safety, with the remaining channel "given back" to broadcasters.<sup>7</sup> This, of course, turns the Commission's efforts to reclaim broadcast spectrum on its head. Moreover, many of the non-public safety users operating in 470-512 MHz also provide critical industrial, transportation, and utility services that should not be disrupted, even assuming there was someplace for these users to relocate. The Broadcasters also oversimplify the situation, as public safety users are not segregated on a single 6 MHz television channel in each of the eleven markets. For example, the 470-512 MHz public safety pool frequencies in Boston, Los Angeles, New York, San Francisco and Washington span both of the TV channels available for land mobile use in those areas (note that three channels are available in Los Angeles, each of which contains extensive public safety users). See 47 C.F.R. § 90.311. Furthermore, many of the licensees in the 470-512 MHz General Access Pool are also public safety entities.<sup>8</sup>

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<sup>7</sup> The Broadcasters do not address those metropolitan areas in which only one channel is available for land mobile.

<sup>8</sup> The Broadcasters also make a subtle, but potentially dangerous suggestion that the Commission reduce channel separation between land mobile operations and co-channel DTV allotments. The Commission's proposal provided for a 250 km separation. Yet, the Broadcasters' "Modified Table" arbitrarily reduces that separation to 240 km, without any explanation or justification. See Broadcasters' Comments at 45. Why is that necessary? What would the impact be on public safety land mobile operations? These critical questions are completely ignored by the Broadcasters. Moreover, the Broadcasters never even address adjacent channel protections.

Finally, the Broadcasters' proposal to cease land mobile use of channel 20 in Philadelphia is absurd. This channel is heavily used by public safety and other land mobile users, for whom there are no alternative radio frequencies currently available. It appears that this and other broadcaster proposals for the 470-512 MHz band are offered for no reason other than to divert attention from Commission's principal proposal to reallocate channels 60-69.

### **CONCLUSION**

For the reasons discussed above and in APCO's initial comments, the Commission should move swiftly to reallocate the spectrum in UHF channels 60-69 now reserved for only broadcast use, and to initiate a separate proceeding to reallocate at least 24 MHz of that spectrum to public safety.


Respectfully submitted,

ASSOCIATION OF PUBLIC-SAFETY  
COMMUNICATIONS OFFICIALS-  
INTERNATIONAL, INC.

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January 24, 1997

Its Attorneys

*National League of Cities ♦ Association of Public Safety Communication Officials ♦ United States Conference of Mayors  
National Conference of State Legislatures ♦ National Association of Counties ♦ The National Sheriffs' Association  
♦ International Association of Chiefs of Police ♦ International Association of Fire Chiefs ♦ American Public Works  
Association ♦ National Coordinating Council on Emergency Management ♦ National Association of Telecommunications  
Officers and Advisors  
♦ National Fire Protection Association ♦ The National Association of State Emergency Medical Services Directors ♦  
♦ International Municipal Signal Association ♦ City of Chicago ♦ City of New York ♦ City of Los Angeles  
♦ League of California Cities ♦ City of Dallas ♦*

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January 16, 1997

The Honorable William Clinton  
President of the United States  
The White House  
1600 Pennsylvania Avenue, N.W.  
Washington, D.C. 20500

Dear Mr. President:

We are writing on behalf of the nation's state and local organizations responsible for the protection, safety, and emergency rescue of Americans and their property to urge you to address the urgent and long-term public safety telecommunications needs of state and local governments as part of your State of the Union priorities and as a part of the budget you submit to Congress next month. This issue is of such importance to the protection of lives and property at times of natural disasters, domestic terrorism, or daily crimes or accidents that require emergency response that we urge your earliest consideration of our concerns.

Last September, the Public Safety Wireless Advisory Committee (PSWAC), created in response to Congress by the Commerce Department and the Federal Communications Commission, issued its final report and recommendations to your administration and the Congress. The Committee included representatives of the Pentagon and the Federal Bureau of Investigation, as well as key public safety representatives from state and local governments. The report determined that states and local governments have less than half the spectrum necessary to effectively and efficiently protect the lives and property of our citizens.

Consequently, we ask that you take the following actions:

- take into account the needs of public safety radio services requesting the completion of WT Docket No. 96-86 prior to proposing any new competitive bidding procedures;
- immediately reserve 25 megahertz from broadcast channels 60-69 exclusively for public safety as recommended by the FCC Advisory Committee; and
- allocate sufficient spectrum to meet state and local public safety needs through the year 2010.

We look forward to a joint effort to enhance our joint ability to protect all of our citizens.

Sincerely :

*National League of Cities  
National Association of Counties  
United States Conference of Mayors  
International Association of Chiefs of Police  
American Public Works Association  
National Association of Telecommunications Officers  
and Advisors  
The National Association of State Emergency Medical  
Services Directors  
City of Los Angeles  
City of Dallas*

*National Conference of State Legislatures  
The National Sheriffs' Association  
International Municipal Signal Association  
International Association of Fire Chiefs  
National Coordinating Council on Emergency Management  
Association of Public Safety Communication Officials  
National Fire Protection Association  
City of Chicago  
City of New York  
League of California Cities*